INSECTS OF MICRONESIA
Diptera:
Dorilaidae (Pipunculidae)[1]

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The Dorilaidae of the Pacific and of the Oriental Region are poorly known, and the literature contains no information concerning any of the Micronesian species. For the entire Pacific region dorilaids have been described only from Australia, New Zealand, Hawaii, Fiji, Indonesia, New Guinea, Samoa, and the Solomon Islands. Except for recent work on the Hawaiian species [Hardy, 1953, Hawaiian Ent. Soc., Proc. **15** (1) : 59-73, 30 figs.], these have all been described as *Pipunculus* and have not been properly placed according to their true generic positions. The majority of them obviously fit in the genus *Dorilas s. l.*, where Aczel (1948, Acta Zool. Lilloana **6**: 5-168) has tentatively placed them. Few have been adequately described and figured, and much work remains to be done before the group is well understood for this region.

Five species are present in the scanty collection available from Micronesia (27 specimens). Four of these appear to be undescribed, but one is represented by a unique and is not being named at this time. No information is available concerning the biology of any Micronesian species.

These flies are parasites of leafhoppers and other Homoptera.

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All drawings were prepared by Marian S. Adachi, University of Hawaii.

The following symbols indicate the Museums in which specimens are stored: US (United States National Museum), BISHOP (Bernice P. Bishop Museum), UH (University of Hawaii), and KU (Kyushu University).

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Holotype, male (US) and allotype, female (US) from Guam, Talofofo, Aug. 1952, Krauss. Eleven paratypes (US, BISHOP, UH), seven males and four females, same data as for type, also Rota, June 18, 1951, R. M. Bohart.

S. MARIANA IS. AGIGUAN: Aug. 2, 1954, on *Cynodon dactylon,* C. J. Davis.

CAROLINE ATOLLS. KAPINGAMARANGI: One female, Ringutoru I., Aug. 25, 1954, on *Nephrolepis* and grasses; one male, Werua I., July 2, 1954, from grass and low vegetation under breadfruit, W. A. Niering.

One female (US)—from south end of Tinian I., June 1946, H. K. Townes —is in poor condition and is not being designated as a paratype.

DISTRIBUTION: Southern Mariana Is., southeastern Caroline Is.

This species appears to be closer to *T. vagabundus* (Knab) from the Nearctic Region than to any other known species. It differs, however, in the details of the hind trochanter of the male and the genitalia. Each hind trochanter has a broad, rounded tumescence below, rather than a small bump as in *T. vagabundus.* The male genitalia differ by having the eighth segment very deeply cleft on the venter and by the extensive membranous area which completely divides the eighth on the dorsum and extends almost to the base of the ninth segment on the venter (fig. 1, *c*). Furthermore, the claspers and the ninth segment are differently developed in *T. micronesiae* (fig. 1, *c*) than in *T. vagabundus.*

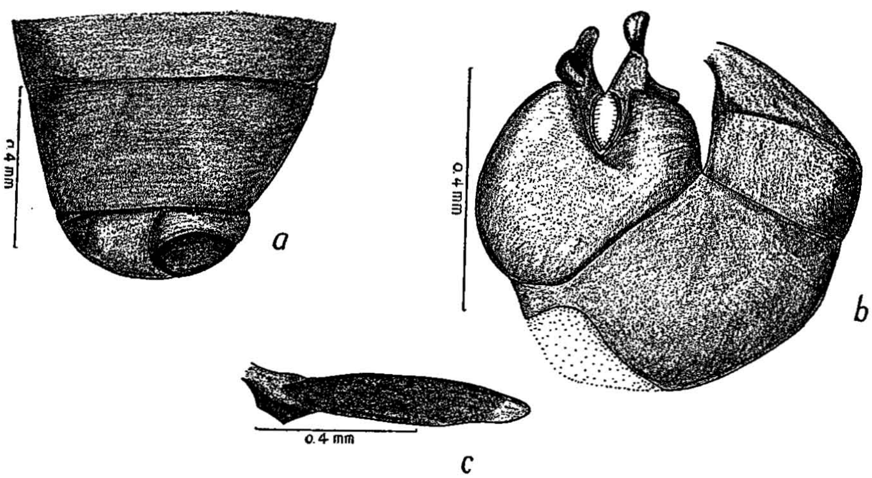


FIGURE 2.—*Tömösváryella subvirescens:* **a,** male genitalia, dorsal view; **b,** male genitalia, ventral view; **c,** hind trochanter and femur of male.

2. **Tömösváryella subvirescens** (Loew). (Figure 2, *a-c.*)

Pipunculus subvirescens Loew, 1872, Berliner Ent. Zeitschr. **16**: 87.

Pipunculus aridis Williston, 1893, North American Fauna **7**: 255.

Pipunculus pilosiventris Becker, 1900, Berliner Ent. Zeitschr. **45**: 233.

Pipunculus glabrum Adams, 1905, Univ. Kansas, Sci. Bull. **3** (6) : 165.
Pipunculus albiseta Cresson, 1911, Am. Ent. Soc., Trans. **36** : 318.
Pipunculus insularis Cresson, 1911, Am. Ent. Soc., Trans. **36** : 317-318.
Pipunculus metallescens Malloch, 1913, U. S. Nat. Mus., Proc. **43** : 298.
Pipunculus knowltoni Hardy, 1939, Kansas Ent. Soc., Jour. **12** : 20-22.

This species is readily distinguished from all known *Tömösváryella* by the hemispherical and symmetrical genitalia of the male (fig. 2, *a*) and by the conspicuous trapezoid development of each hind trochanter (fig. 2, *c*). The shape of the male claspers is also quite distinctive (fig. 2, *b*). The inner is nearly parallel-sided, truncate at the apex; and the outer is thick, broad, and lobate at the base and attenuated to a blunt, rounded apex. Length: Body, 3 mm.; wings, 3.3 mm.

DISTRIBUTION: Southern Mariana Is., Caroline Is. This is the most widespread species of the entire family Dorilaidae. It has been recorded throughout much of the world: Palearctic, Nearctic, Neotropical, Ethiopian, and Oriental Zones. This is the first record for the Pacific region.

S. MARIANA IS. ROTA: June 1946, Townes. GUAM: Tarague, Apr. 1936, Bryan; Piti, Nov. 1936, swept from lawn grass, Swezey.

PALAU. NGERKABESANG (Arakabesan): July 1946, Townes.

CAROLINE ATOLLS. PULO ANNA: Sept. 1952, Krauss.

Genus **Dorilas (Eudorylas)** Aczel

Eudorylas Aczel, 1940, Zool. Anzeiger **132** (7-8) : 151.
Dorilas (*Eudorylas*) Aczel, Hardy, 1943, Univ. Kansas, Sci. Bull. **29** (1) : 55.

This subgenus is distinguished from *Dorilas* (*Dorilas*) by the absence of a propleural fan of hairs. I have not been able to find consistent accompanying characters which will differentiate these groups, and prefer to treat *Eudorylas* as a subgenus. The genus *Dorilas* is separated from other dorilaids by the presence of a stigma in the wing, by the hemispherical shape of the head, and by the lack of vertical, ocellar, mesonotal, or scutellar bristles.

3. Dorilas (Eudorylas) hiatus Hardy, n. sp. (fig. 3, *a*, *b*).

Male: Head has junction of compound eyes about three-fourths as long as lower portion of front. Lower front is densely yellow-gray pubescent; upper portion and ocellar triangle are polished black. Face is gray pubescent and is just slightly wider than front. Occiput is brown pollinose above and gray on sides and below. Third antennal segment is short acuminate, dirty yellow in ground color, and densely white pubescent. First two segments are black. *Thorax* subopaque brownish gray on dorsum, gray on sides. Humeri and halteres are yellow. Scutellum has a row of fine, short bristles along its hind margin. *Legs* with coxae and a broad band on each femur black, otherwise rufous. Moderately strong flexor spines are present on all femora. No strong erect bristles are present on outside surface of hind tibia. *Wings* hyaline, very faintly gray. Stigma fills all of third costal section, and third is equal in length to fourth; the two sections combined are slightly longer than fifth section. The r-m cross vein is situated just before middle of cell 1st M_2, and last section of M_{1+2} is slightly curved. *Abdomen* opaque, predominantly brown

Dorilas (*Eudorylas*) Aczel. Hardy. 1943. Univ. Kansas. Sci. Bull. 29 (1) : 55.

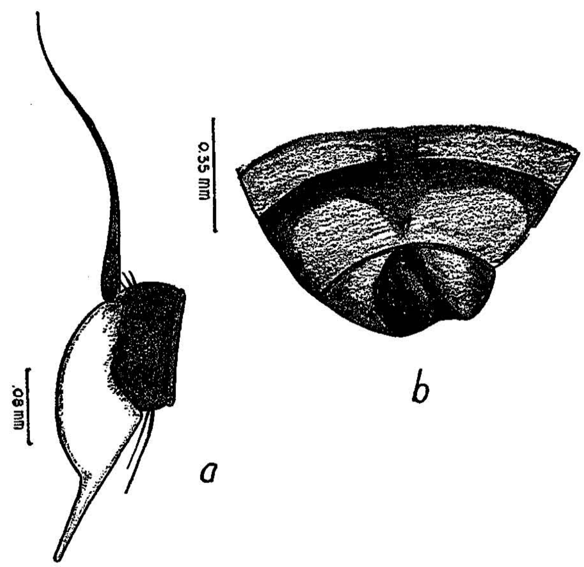


FIGURE 5.—*Dorilas* (*Eudorylas*) *gressitti:* **a**, antenna; **b**, male genitalia, dorsal view.

5. Dorilas (Eudorylas) sp. (fig. 6, *a, b*).

The one male specimen, which is in very poor condition, appears related to *Dorilas cressoni* (Johnson) from Jamaica because of the absence of a membranous area on the genitalia and because of the yellow to rufous ground coloring of the sides of the abdomen. It differs, however, in having the third

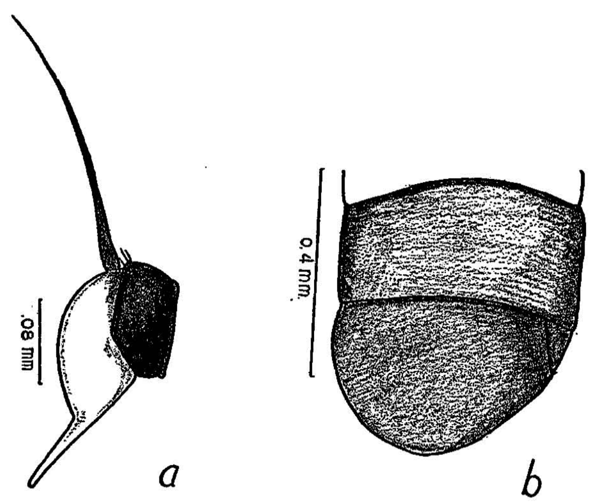


FIGURE 6.—*Dorilas* (*Eudorylas*) sp.: **a**, antenna; **b**, male genitalia, dorsal view.

antennal segment long, attenuated at the apex (fig. 6, *a*) as well as in details of body and wing structures. It superficially resembles *D. rubidus* Hardy of Brazil and *D. abdominalis* (Loew) of Africa, but structurally it is quite different from either of these. The species can readily be distinguished by its elongate third antennal segment (fig. 6, *a*) and by the large semi-spherical genitalia with no apparent membranous area (fig. 6, *b*). The thorax and abdomen are brown pollinose on the dorsum and are yellow to rufous-tinged in the ground color on the sides. The wings are completely ruined on the specimen at hand. Length: Body 2.4 mm.; wings, 2.8 mm.

DISTRIBUTION: Bonin Is.

BONIN IS. HAHA JIMA: Okimura, July 1936, Hayato Ikeda (KU).